

Listing of Claims:

1. (Currently Amended) In a fuel dispensing system for refueling a vehicle equipped with an ORVR system wherein ~~the~~ said fuel dispensing system includes an assist-type vapor recovery system adapted to ~~process~~ transfer vapors expelled from a fuel tank on ~~the~~ said vehicle when ~~the~~ said fuel tank is filling with fuel dispensed from ~~an end of a~~ spout of a nozzle inserted into a filler tube of ~~the~~ said vehicle leading to the said fuel tank and ~~the~~ said nozzle being coupled to a hose of ~~the~~ said fuel dispensing system, ~~the~~ said nozzle including an automatic shut-off mechanism for ~~ceasing~~ stopping the flow of fuel through ~~the~~ said nozzle when ~~the~~ said fuel tank is approaching a filled condition, ~~the~~ said shut-off mechanism including a diaphragm ~~separating~~ having a first side and ~~chamber from a second chamber~~ side, the improvement comprising:

a first passageway in communication with ~~the~~ said first ~~chamber~~ side of said ~~diaphragm and the assist-type vapor recovery system of the fuel dispensing system an~~ area near said end of said spout; and

a second passageway in communication with ~~the~~ said second ~~chamber~~ side of ~~said diaphragm and the ORVR system of the vehicle~~ an area near said end of said spout;

wherein when ~~the~~ said vehicle is being refilled with fuel from ~~the~~ said fuel dispensing system, ~~a first air pressure relative to atmospheric pressure and~~ generated by ~~the~~ said assist-type vapor recovery system is ~~communicated to the first chamber and~~ communicated to the first chamber and ~~a second air pressure generated by the~~ said ORVR system is communicated to ~~both said first and said the second chamber~~ sides of said diaphragm such that ~~the~~ said diaphragm ~~of the shut-off mechanism~~ is not substantially deflected by ~~the combination of the first and second air~~ said pressures until such time as ~~the~~ said shut-off mechanism senses ~~the~~ said fuel tank approaching the filled condition by fuel blocking at least said second passageway.

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2. (Currently Amended) The fuel dispensing system of claim 1 wherein ~~the~~ said first and second passageways are in substantially sealed communication with ~~the~~ said first and second ~~chambers~~ sides of said diaphragm, respectively.

3. (Currently Amended) The fuel dispensing system of claim 2 further comprising:

a boot surrounding ~~the~~ said spout and adapted to be in substantially sealed contact with ~~the~~ said filler tube as part of ~~the second~~ said first passageway.

4. (Currently Amended) The fuel dispensing system of claim 1 ~~2~~ further comprising: wherein said second passageway is coupled to a vacuum generator within said nozzle ~~a vent tube mounted within the spout of the nozzle and coupled to a vent in the spout as part of the first passage.~~

5. (Currently Amended) A refueling arrangement compatible with an ORVR equipped vehicle comprising:

a storage tank for storing fuel;

a hose including a fuel passage for transferring ~~the~~ fuel from ~~the~~ said storage tank;

a pump operably coupled to ~~the~~ said hose for pumping ~~the~~ fuel through said fuel passage ~~the hose~~;

a nozzle connected to ~~the~~ said hose for dispensing ~~the~~ fuel through an end of said nozzle and a filler tube ~~and~~ into a fuel tank of a said vehicle;

~~wherein the vehicle includes an ORVR system for processing vapors displaced from the fuel tank;~~

a vapor recovery system for processing transferring vapors displaced from ~~the~~ said fuel tank, ~~the~~ said vapor recovery system including a pump for pumping ~~the~~ vapors

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from ~~the~~ said fuel tank and through ~~the~~ said nozzle and a vapor passage also included in said hose to the said storage tank;

said nozzle including a shut-off mechanism coupled to the nozzle for ceasing for stopping the flow of fuel through the said nozzle and into the said filler tube when the said fuel tank is approaching a filled condition, the said shut-off mechanism including a diaphragm having a first side and a second side separating a first chamber from a second chamber;

a first passageway in communication with ~~the~~ said first side of said diaphragm and an area near said end of said nozzle chamber and the vapor recovery system; and

a second passageway in communication with ~~the~~ said second side of said diaphragm and an area near said end of said nozzle chamber and the ORVR system of the vehicle;

wherein when ~~the~~ said vehicle is being refilled with fuel, from the fuel dispensing system a first air pressure relative to atmospheric pressure and generated by the vapor recovery system is communicated to the first chamber and a second air pressure generated by the and said ORVR system is communicated to both said first and said the second chamber sides of said diaphragm such that the said diaphragm of the shut-off mechanism is not substantially deflected by the combination of the first and second air said pressures until such time as the said shut-off mechanism senses the said fuel tank approaching the filled condition by fuel blocking at least said second passageway.

6. (Currently Amended) The refueling arrangement of claim 5 wherein ~~the~~ said first and second passageways are in substantially sealed communication with ~~the~~ said first and second chambers sides of said diaphragm, respectively.

7. (Currently Amended) The refueling arrangement of claim 6 further comprising:
a boot surrounding ~~the~~ said spout and adapted to be in substantially sealed contact with ~~the~~ said filler tube as part of ~~the second~~ said first passageway.

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8. (Currently Amended) The refueling arrangement of claim 5 ~~further comprising: wherein said second passageway is coupled to a vacuum generator within said nozzle a vent tube mounted within the spout of the nozzle and coupled to a vent in the spout as part of the first passage.~~

9. (New) An arrangement for making refueling nozzles having diaphragm controlled shut-off devices compatible with ORVR equipped vehicles, said arrangement comprising:

a first passageway having a first end in communication with a first side of a diaphragm of a shut-off device of a refueling nozzle and a second end; and

a second passageway having a first end in communication with a second side of said diaphragm and a second end;

wherein said second ends of said first and second passageways are vented near a fuel discharge end of said nozzle.

10. (New) The arrangement as claimed in claim 9 wherein said first and second passageways are located within said nozzle.

11. (New) The arrangement as claimed in claim 9 wherein said first passageway is vented into a vapor return path of said nozzle.

12. (New) The arrangement as claimed in claim 11 wherein said vapor return path is defined by space between a spout of said nozzle and a boot surrounding said spout.

13. (New) The arrangement as claimed in claim 9 wherein said second passageway is coupled to a vacuum generator in said nozzle.

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14. (New) The arrangement as claimed in claim 9 wherein a vacuum generator is connected into said second passageway between said second side of said diaphragm and said second end of said second passageway where it is vented near said fuel discharge end of said nozzle.